

10/539102

Amendments to the Claims

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1. (*Currently Amended*) An electric device (~~1~~, ~~100~~) with a body (~~2~~, ~~102~~) having:  
[[ - ]] a resistor (~~7~~, ~~107~~) comprising a phase change material being changeable between a first phase and a second phase, the resistor (~~7~~, ~~107~~) having a first electrical resistance when the phase change material is in the first phase and a second electrical resistance, different from the first electrical resistance, when the phase change material is in the second phase, and  
[[ - ]] a heating element (~~6~~, ~~106~~) being able to conduct a current for enabling a transition from the first phase to the second phase, the heating element (~~6~~, ~~106~~) being arranged in parallel with the resistor (~~7~~, ~~107~~).
2. (*Currently Amended*) An electric device (~~1~~) as claimed in claim 1, wherein the heating element (~~6~~) has a heating element electrical resistance which is smaller than the maximum of the first electrical resistance and the second electrical resistance.
3. (*Currently Amended*) An electric device (~~1~~) as claimed in claim 2, wherein the heating element's electrical resistance is larger than 0.3 times the minimum of the first electrical resistance and the second electrical resistance.
4. (*Currently Amended*) An electric device (~~1~~, ~~100~~) as claimed in claim 1, wherein the heating element (~~6~~, ~~106~~) and the resistor (~~7~~, ~~107~~) are in direct contact.
5. (*Currently Amended*) An electric device (~~100~~) ~~as claimed in claim 1, 2, 3 or 4, as~~ claimed in claim 1, wherein the phase change material constitutes a conductive path between a first contact area and a second contact area, a cross-section of the conductive path being smaller than the first contact area and the second contact area.
6. (*Currently Amended*) An electric device (~~100~~) as claimed in Claim 5, wherein a part of the conductive path having said cross-section constitutes a volume of phase change material, the volume having an electrical resistance which is smaller than an electrical

contact resistance at the first contact area and/or at the second contact area, independent of whether the phase change material is in the first phase or the second phase.

7. (*Currently Amended*) An electric device (~~1, 100~~) as claimed in Claim 1, wherein the heating element material is of a composition  $X_{100-(t+s)}Si_sY_t$ , where t and s denote atomic percentages satisfying  $t < 0.7$  and  $s+t > 0.3$ , X comprises one or more elements selected from Ti and Ta, and Y comprises one or more elements selected from C and N.

8. (*Currently Amended*) An electric device (~~1, 100~~) as claimed in Claim 7, wherein X is substantially free from Ti.

9. (*Currently Amended*) An electric device (~~1, 100~~) as claimed in Claim 7, wherein s is smaller than or equal to 0.7.

10. (*Currently Amended*) An electric device (~~1, 100~~) as claimed in Claim 7, wherein Y comprises N.

11. (*Currently Amended*) An electric device (~~100~~) as claimed in Claim 1, wherein the resistor constitutes a memory element, and the body (~~102~~) comprises:

[[ - ]] an array of memory cells, each memory cell comprising a respective memory element and a respective selection device (~~171~~), and

[[ - ]] a grid of selection lines (~~120, 121~~),  
each memory cell being individually accessible via the respective selection lines (~~120, 121~~) connected to the respective selection device (~~170~~).

12. (*Currently Amended*) An electric device (~~100~~) as claimed in Claim 11, wherein:

[[ - ]] the selection device (~~171~~) comprises a metal oxide semiconductor field effect transistor having a source region (~~172~~), a drain region (~~173~~) and a gate region (~~174~~), and

[[ - ]] the grid of selection lines (~~120, 121~~) comprises N first selection lines (~~120~~), M second selection lines (~~121~~), and an output line,

the resistor (~~170~~) of each memory element electrically connecting a first region selected from the source region (~~172~~) and the drain region (~~173~~) of the corresponding metal oxide semiconductor field effect transistor to the output line, a second region of the corresponding metal oxide semiconductor field effect transistor selected from the source region (~~172~~) and the drain region (~~173~~) and being free from contact with the first region, being electrically connected to one of the N first selection lines (~~120~~), the gate region (~~174~~) being electrically connected to one of the M second selection lines (~~121~~).